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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/743,730  | 12/24/2003  | Takundo Isobe        | 247107US2           | 9108             |
| 22850   | 7590        | 07/29/2005           | EXAMINER            |                  |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.<br>1940 DUKE STREET<br>ALEXANDRIA, VA 22314 |             |                      | GLEITZ, RYAN M      |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2852                |                  |

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/743,730 | <b>Applicant(s)</b><br>ISOBE, TAKUNDO |  |
|                              | <b>Examiner</b><br>Ryan Gleitz       | <b>Art Unit</b><br>2852               |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 11-15, 17, 18, 22-25, 27, 29, 30, 32, 34-37 and 39 is/are rejected.
- 7) ☒ Claim(s) 5, 8-10, 16, 19-21, 26, 28, 31, 33, 38, 40 and 41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/26/04: 3/24/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Drawings***

Figures 17 and 18 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 7, 11, 13-15, 17, 18, 22, 24, 25, 27, 29, 30, 32, 34-37, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoki (JP 2000-356936).

Aoki discloses a transfer apparatus including a belt (3) that rotates and carries a plurality of images directly. A scale (16) is provided along at least one side of entire of the belt (3). A sensor (17) reads the scale on the belt to obtain scale information. An actual speed calculating unit that calculates a speed of the belt from the scale information, as shown by step S3 in figure

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14. See [0053]. Figures 7 and 9 show a control unit that provides a control to correct speed of the belt (3) according to the speed calculated.

The influence of the eccentricity of a belt drive roller is removed by emphasizing a specific frequency component and controlling the belt based on the filtered speed information. Abstract, lines 1-5; figs. 3-6. This reads on the control unit includes a frequency-correcting unit that performs correction of only a frequency component that is fluctuating of low frequency that is smaller than a predetermined frequency that is developed due to a change in a speed of the belt, from among speed fluctuations of the belt to adjust the speed of the belt to a predetermined target speed.

Regarding claim 2, the filter is a an extracting unit that extracts only the frequency component that is fluctuating; and a correction control unit performs correction of the frequency component that is fluctuating extracted by the extracting unit.

Regarding claim 3, eccentricity of the drive roller is a component that appears repeatedly on periodic basis due to any one of components of the belt and components of a driving system of the belt.

Regarding claim 4, the frequency from the eccentricity of a drive motor is inherently not greater than 100 hertz. See calculations, [0078]-[0079].

Regarding claims 6, 7, 17, and 18, the frequency component that is fluctuating is caused by an eccentricity of the roller, which could change based on a temperature of an environment.

Abstract, line 3.

Regarding claim 11, the belt (3) is an intermediate transfer belt.

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Regarding claims 13-15, 22, figure 4 shows that the frequency component that is fluctuating that is smaller than a predetermined frequency.

Regarding claims 24, 25, 27, 29, 30, 32, and 34, the belt is in an image forming apparatus.

Regarding claims 35-37 and 39, the transfer apparatus above reads on the method of correcting a speed of a belt.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki (JP 2000-356936) in view of Comparison of electrophotographic color printer methods from Oki Technical Review ("Oki").

Aoki disclose the transfer apparatus and method above but do not disclose that the belt could be used as a recording-material carrier belt that carries the recording material and the images on the plurality of photosensitive drums are transferred to the recording material one after another so that the images are superimposed.

However, Oki discloses the various types of color printing including the intermediate transfer body method of Aoki and the tandem method, which uses a recording-material belt carrier.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transfer apparatus of Aoki in a tandem method apparatus taught by Oki to have superb color speed.

***Allowable Subject Matter***

Claims 5, 8-10, 16, 19-21, 26, 28, 31, 33, 38, 40, and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Other Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakayasu et al. (US 6,049,690) disclose a wow and flutter correction unit for a belt system.

***Contact Information***

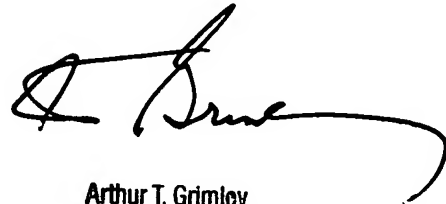
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Gleitz whose telephone number is (571) 272-2134. The examiner can normally be reached on Monday-Friday between 9:00AM and 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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